

REMARKS

SUMMARY OF CLAIMS

Claims 9-19 are pending in the application.

Claims 9-12 and 17-18 are withdrawn.

Claims 16 and 19 are withdrawn-currently amended.

Claim 13 is currently amended.

Claims 14-15 are original.

Claims 20-22 are cancelled.

Support for the amended claims can be found in the specification and figures, for example, at page 33, lines 21-22; page 28 lines 8-10 and replacement Figures 12A-B and 14. No new matter is entered by the amendments.

INFORMATION DISCLOSURE STATEMENT

Applicants' Information disclosure statement submitted August 26, 2008 was apparently not acceptable to the Examiner because of a clerical error in the formatting that left no room for the Examiner's initial. Applicants' apologize for the inconvenience to the Examiner and have corrected the error in the re-submitted statement accompanying this response under Request for Continued Examination. Reconsideration of the references is requested.

SEQUENCE IDENTIFICATION

In the Action the Applicant was asked to comply with the sequence rules by inserting sequence identification numbers. Accordingly, claims 16 and 19 have been amended to reflect the SEQ ID Nos corresponding to the recited sequences of Figures 12 and 21 respectively.

CLAIM REJECTIONS

I. Claim Rejections – 35 U.S.C. §103(a)

The Examiner has rejected claims 13-15 and 19-22 under 35 U.S.C. §103(a) as being unpatentable over Short et al. (US Patent 6,720,014; "Short" hereinafter) in view of Berka et al. (US Patent 6,221,644; "Berka" hereinafter).

The Applicants respectfully traverse the rejection.

Short in view of Berka does not meet the criteria for a prima facie case of obviousness since the references either alone or in combination do not teach or suggest each and every limitation of the claimed inventions.

In the Action, it is stated that the "phytase of Short is identical to that of SEQ ID NO:2 herein". Upon closer examination it is apparent that the amino acid sequences disclosed in Short are at best, under 95% identical to that of SEQ ID NO: 2 of the present invention. When one determines the % identity between SEQ ID NO: 2 of the present invention and the SEQ ID NOs: 1 and 2 (amino acid sequence) as disclosed in Short, there is less than 95% amino acid identity.

In amended form, claim 13 recites a method of producing recombinant phytase having modified activity, said method comprising:

- a) providing a nucleic acid comprising a sequence encoding a signal sequence operable in a *Bacillus* species and a sequence which is at least 95% identical to SEQ ID No. 2;
- b) subjecting said nucleic acid to error-prone amplification;
- c) transforming a host cell with an expression construct comprising a product of said amplification; and
- d) culturing said host cell under conditions suitable for said cell to express said amplification product.

As mentioned above, Short does not teach a phytase amino acid sequence which is at least 95% identical to SEQ ID NO: 2 of the invention. Additionally, Short does not teach "a sequence encoding a signal sequence operable in a *Bacillus* species and a sequence which is at least 95% identical to SEQ ID No. 2" as presently recited in claim 13. Berka, which teaches phytases of certain species including *A. niger* and *Thermomyces*, does not cure the deficiency of Short since Berka similarly fails to disclose "a sequence encoding a signal sequence operable in a *Bacillus* species and a sequence which is at least 95% identical to SEQ ID No. 2" of the present invention.

Short in view of Berka further provide no motivation or suggestion for "a sequence encoding a signal sequence operable in a *Bacillus* species and a

sequence which is at least 95% identical to SEQ ID No. 2" as claimed in the present invention.

As a prima facie case of obviousness has not been met for claim 13, withdrawal of the rejection is respectfully requested. Claims 14 and 15 depend from claim 13 as therefore include every limitation of claim 38 including "a sequence encoding a signal sequence operable in a *Bacillus* species and a sequence which is at least 95% identical to SEQ ID No. 2". It follows that the references either alone or in combination fail to support a prima facie case of obviousness for claims 14 and 15 as well. Withdrawal of the rejections is respectfully requested.

CONCLUSION

In light of the remarks set forth above, Applicants believe they are entitled to a letters patent. Applicants respectfully solicit the Examiner to expedite the prosecution of the patent application to issuance. Should the Examiner have any question, the Examiner is encouraged to telephone the undersigned.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 07-1048 (Attorney docket No. GC 718-2-US) for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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